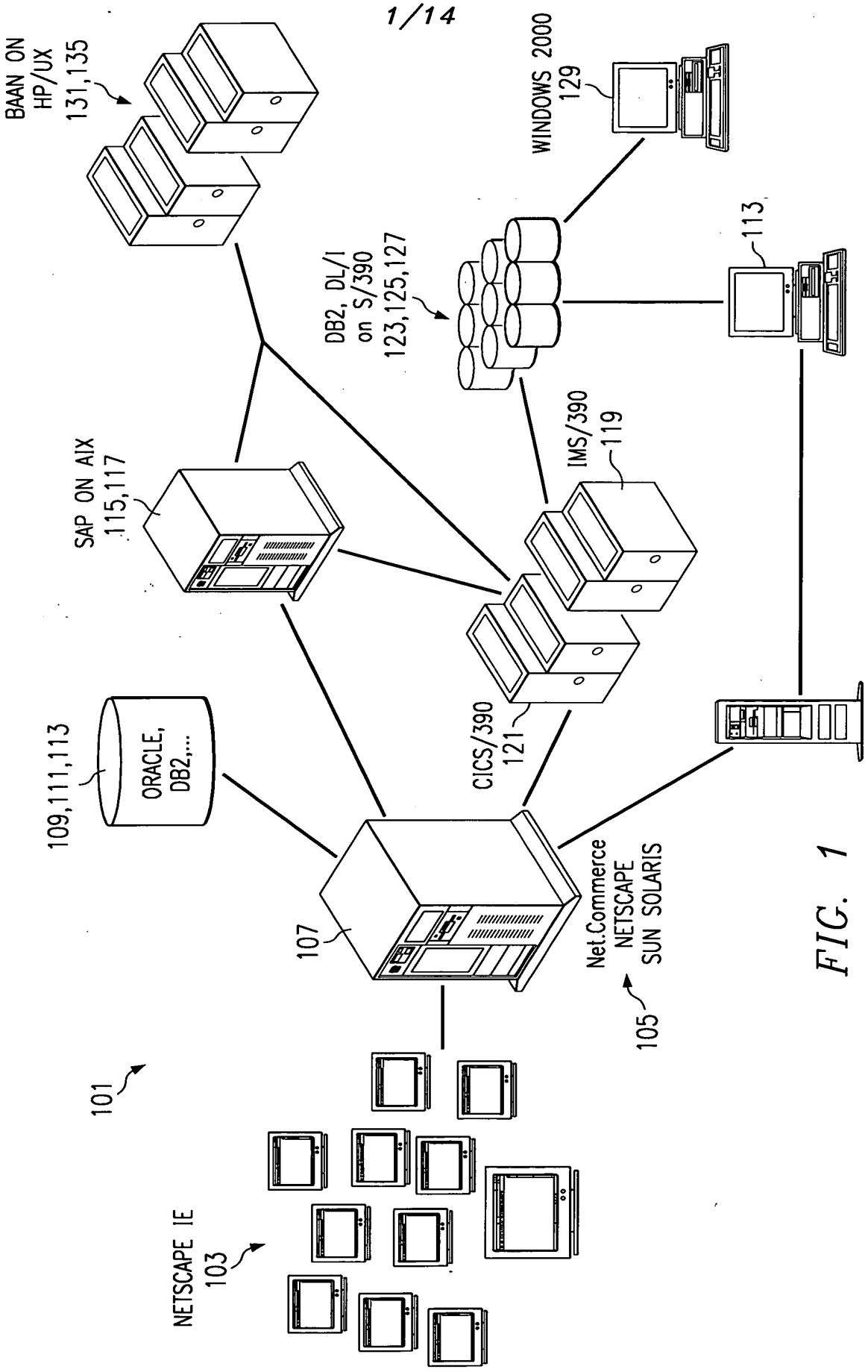

BAAN ON HP/UX 131,135
WINDOWS 2000 129
DB2, DL/I on S/390 123,125,127
113
SAP ON AIX 115,117
IMS/390 119
CICS/390 121
109,111,113
ORACLE, DB2,...
107
Net.Commerce NETSCAPE SUN SOLARIS
105
101
NETSCAPE IE 103

FIG. 1

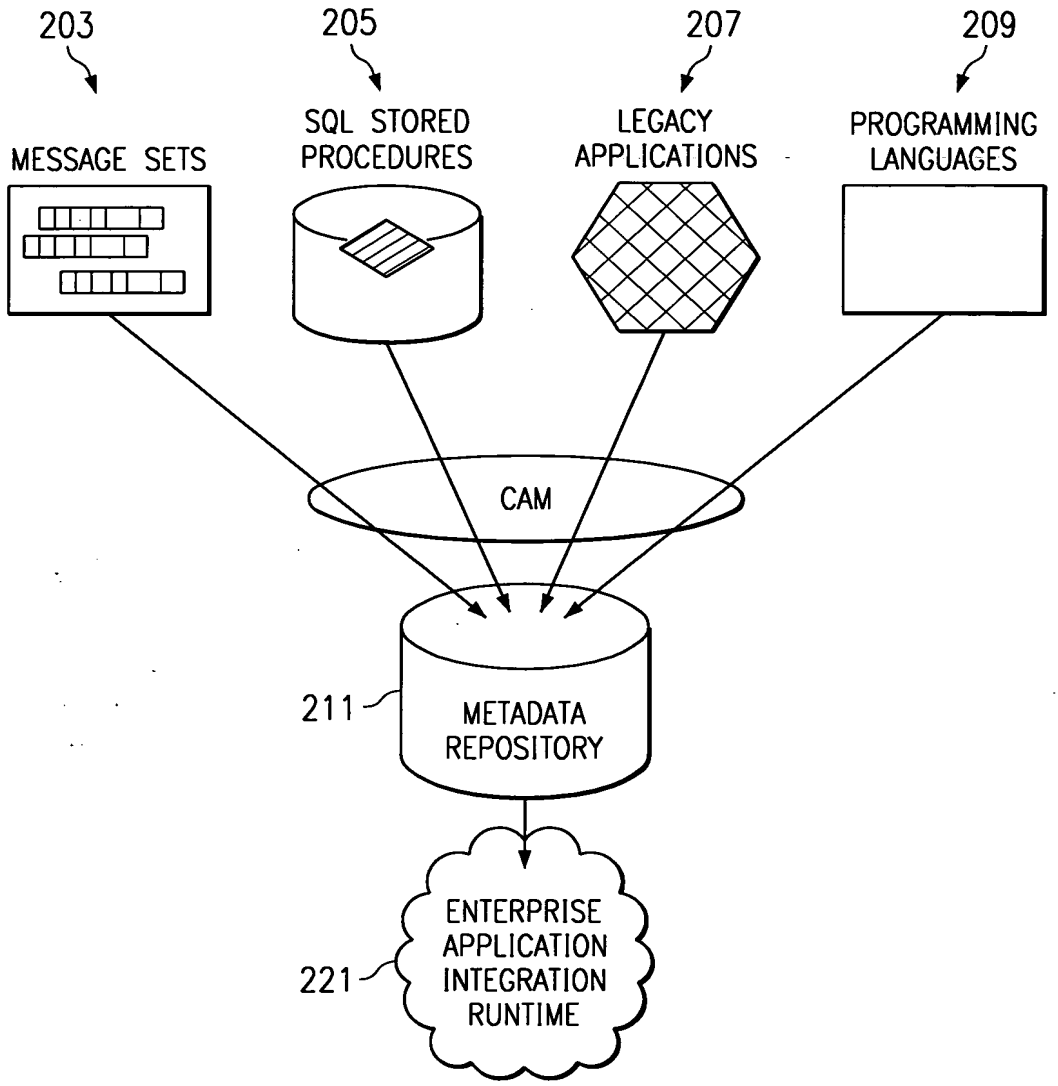

203
205
207
209
MESSAGE SETS
SQL STORED PROCEDURES
LEGACY APPLICATIONS
PROGRAMMING LANGUAGES
CAM
211
METADATA REPOSITORY
221
ENTERPRISE APPLICATION INTEGRATION RUNTIME

FIG. 2

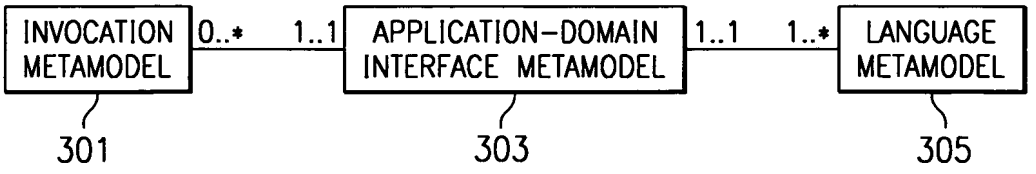

INVOCATION METAMODEL
0..*
1..1
APPLICATION-DOMAIN INTERFACE METAMODEL
1..1
1..*
LANGUAGE METAMODEL
301
303
305

FIG. 3

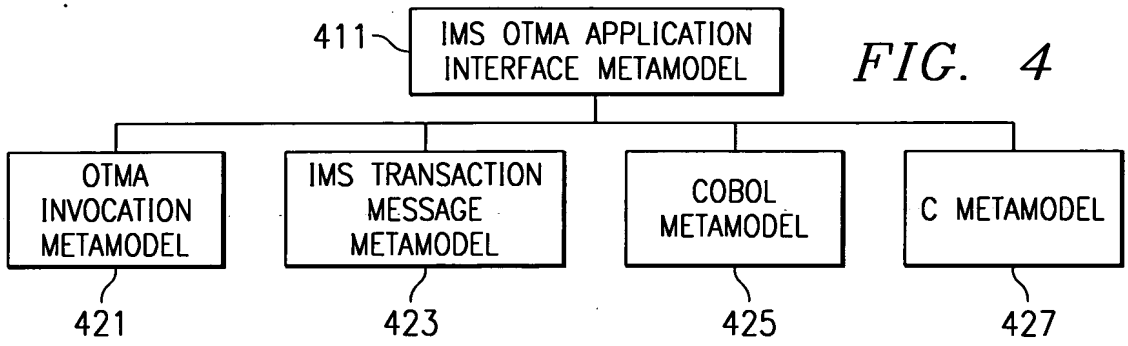


FIG. 4

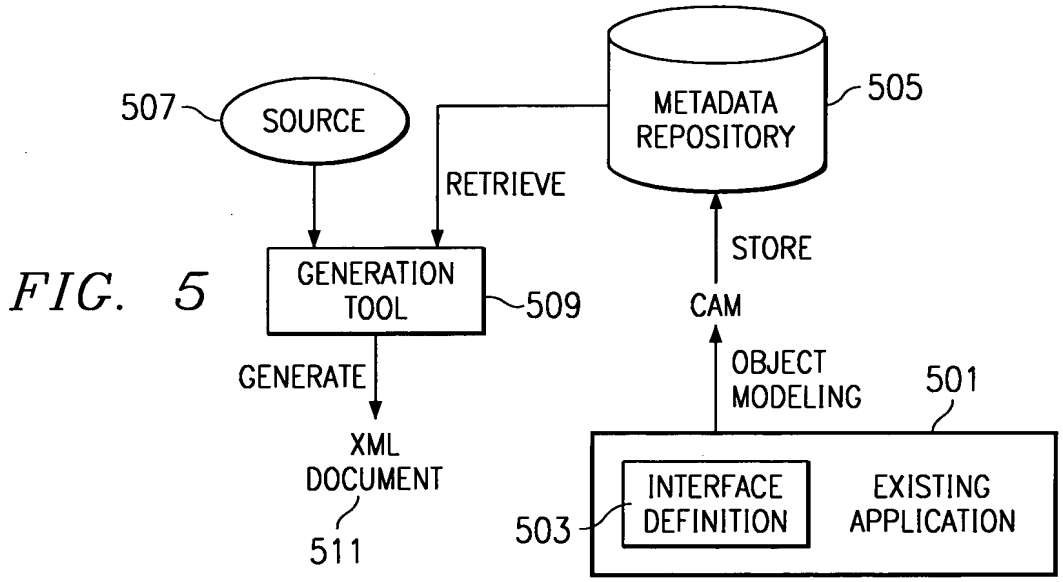


FIG. 5

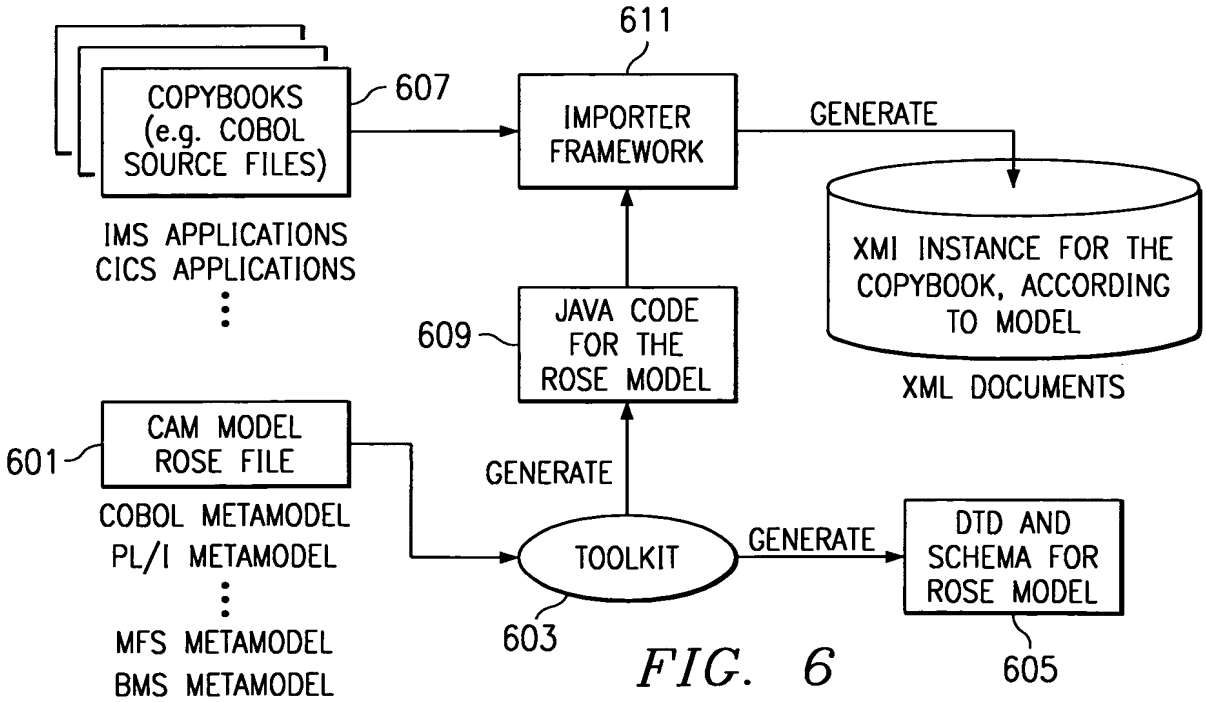


FIG. 6

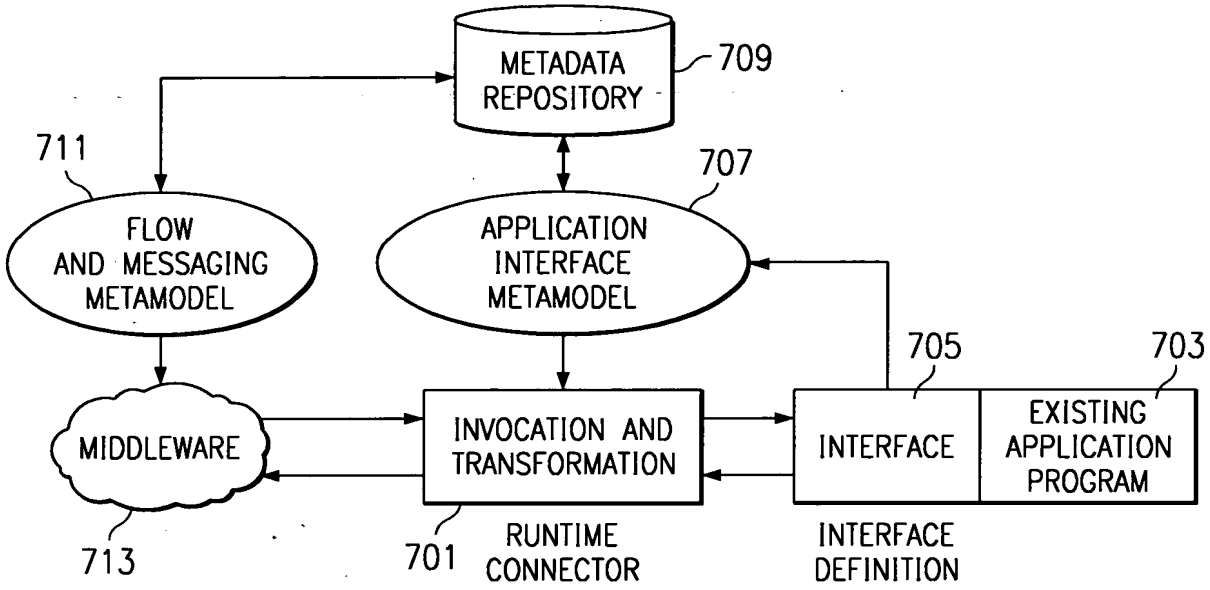

METADATA REPOSITORY
709
711
707
FLOW AND MESSAGING METAMODEL
APPLICATION INTERFACE METAMODEL
705
703
MIDDLEWARE
INVOCATION AND TRANSFORMATION
INTERFACE
EXISTING APPLICATION PROGRAM
713
701
RUNTIME CONNECTOR
INTERFACE DEFINITION

FIG. 7

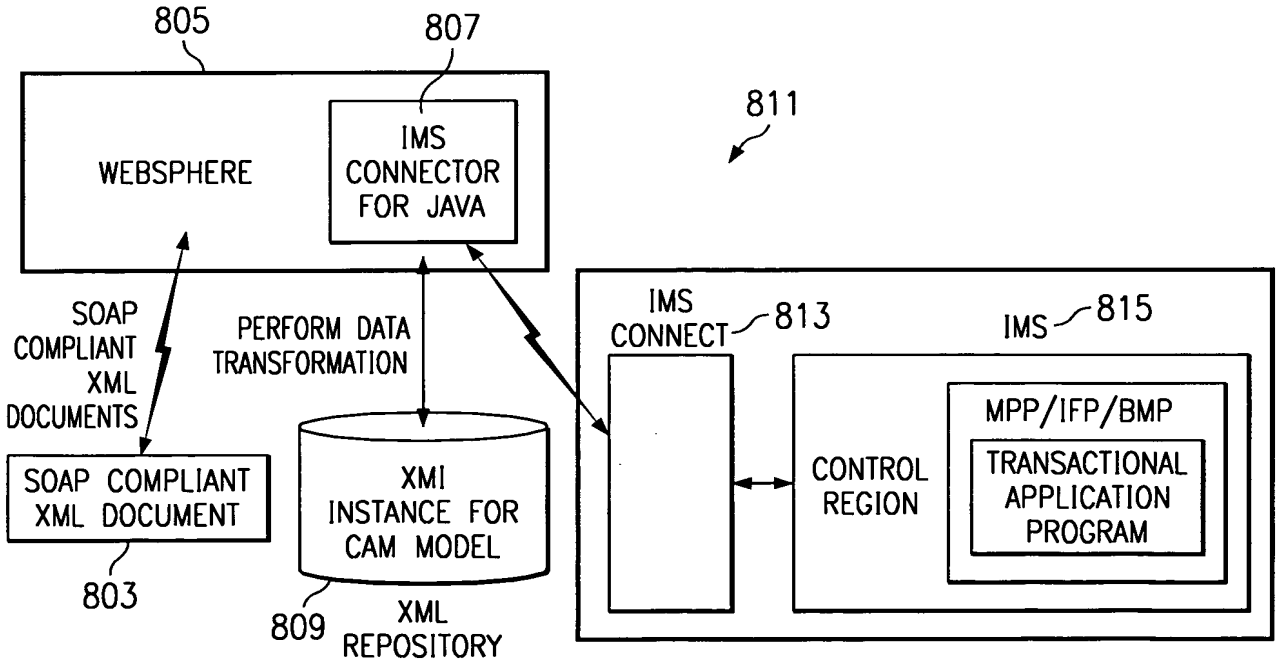

805
807
811
WEBSPHERE
IMS CONNECTOR FOR JAVA
SOAP COMPLIANT XML DOCUMENTS
PERFORM DATA TRANSFORMATION
IMS CONNECT
813
IMS
815
MPP/IFP/BMP
CONTROL REGION
TRANSACTIONAL APPLICATION PROGRAM
SOAP COMPLIANT XML DOCUMENT
XMI INSTANCE FOR CAM MODEL
803
809
XML REPOSITORY

FIG. 8

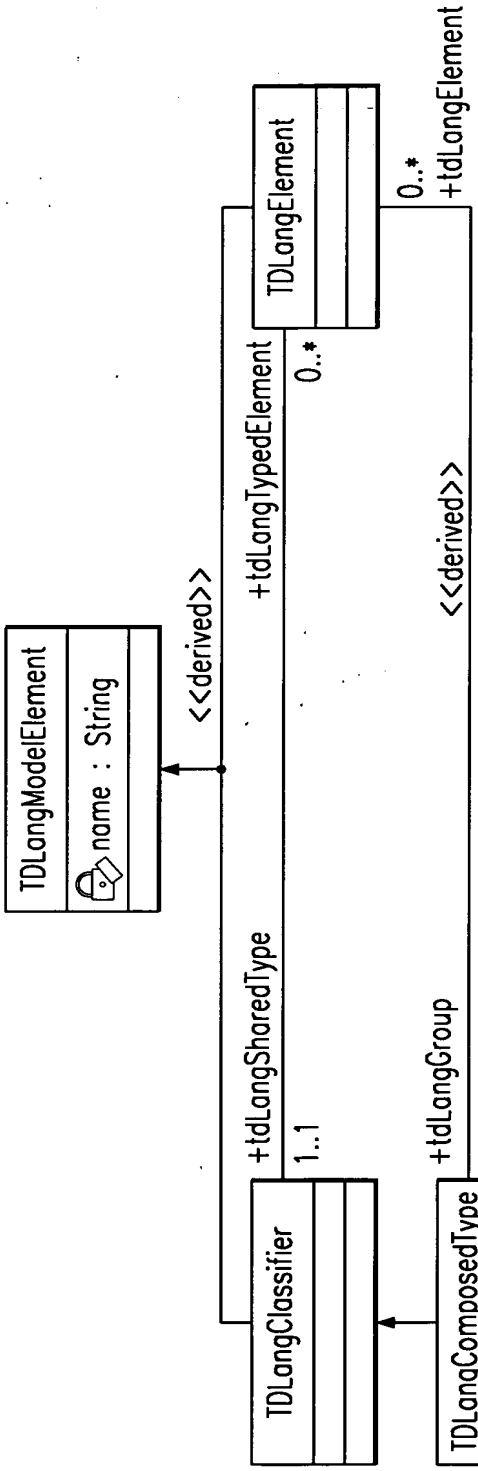

TDLangModelElement
name : String
<<derived>>
+tdLangTypedElement
0..*
TDLangElement
0..*
+tdLangElement
<<derived>>
+tdLangSharedType
1..1
+tdLangGroup
0..1
TDLangClassifier
TDLangComposedType

FIG. 9

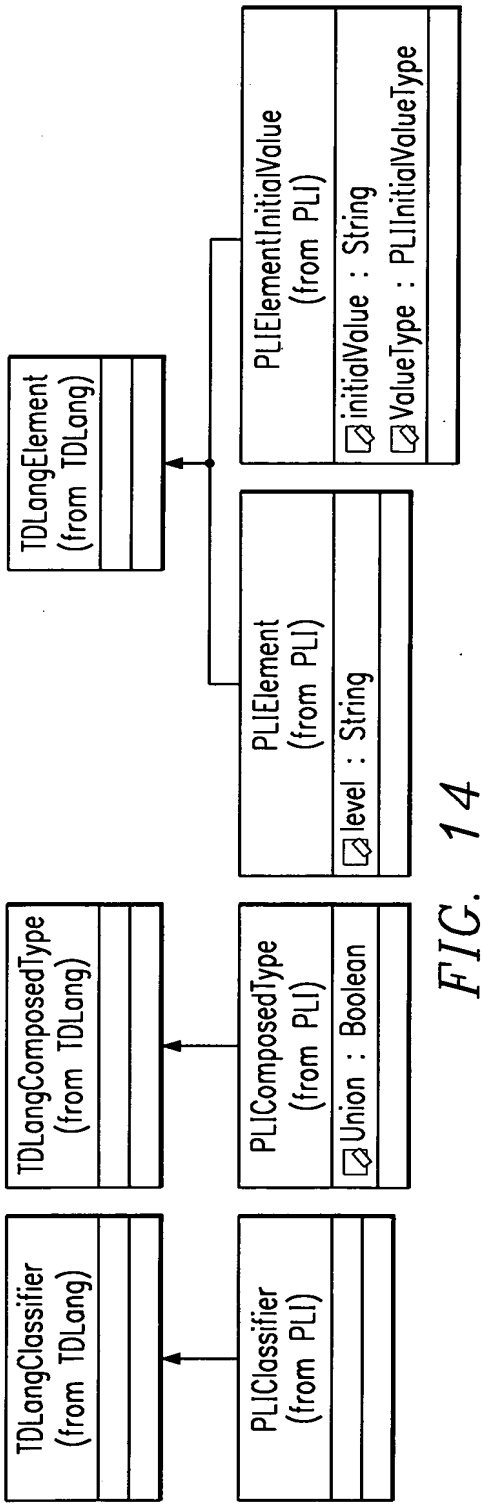

TDLangElement
(from TDLang)
PLIElementInitialValue
(from PLI)
initialValue : String
ValueType : PLIInitialValueType
PLIElement
(from PLI)
level : String
TDLangComposedType
(from TDLang)
PLIComposedType
(from PLI)
Union : Boolean
TDLangClassifier
(from TDLang)
PLIClassifier
(from PLI)

FIG. 14

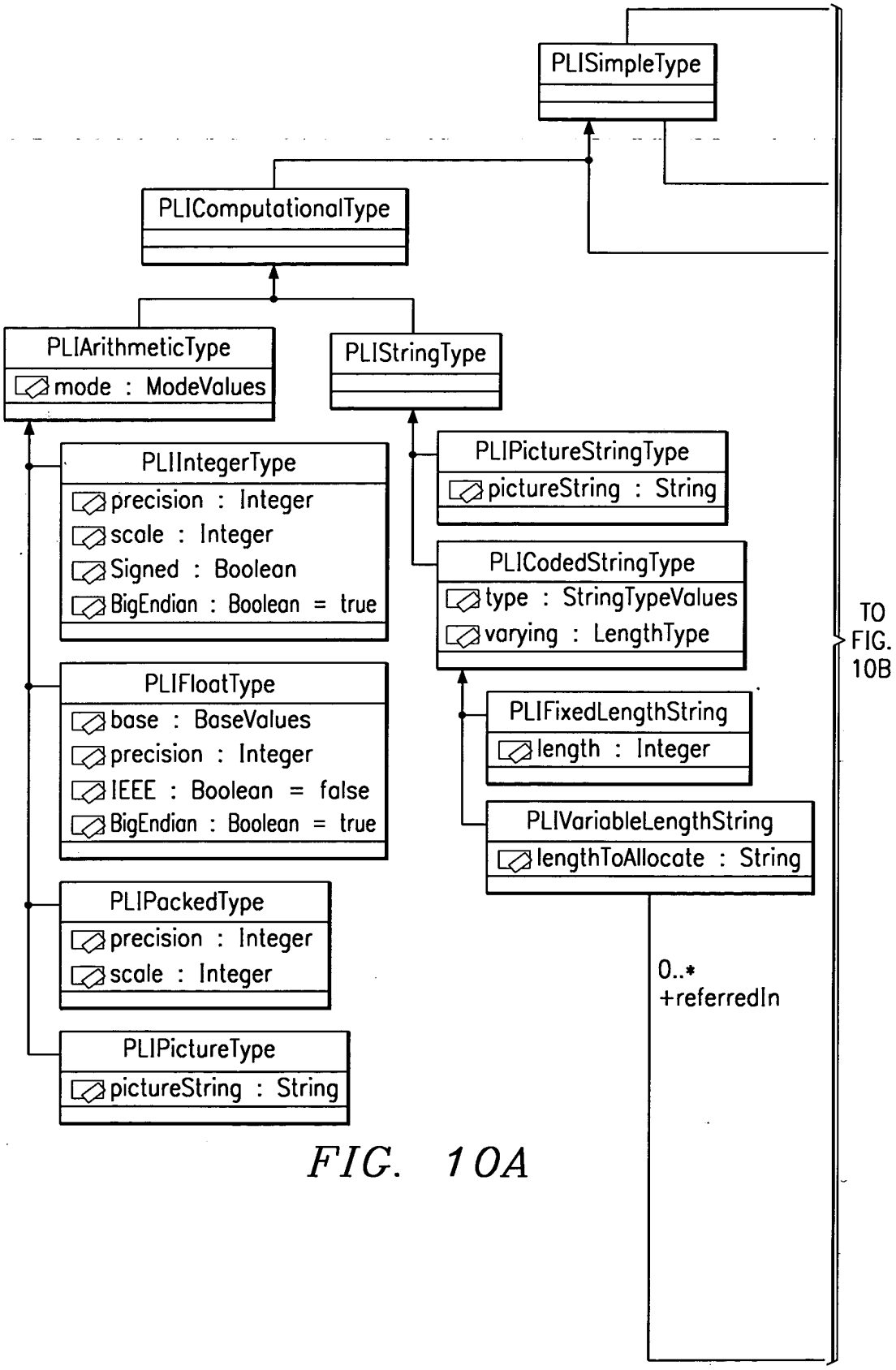
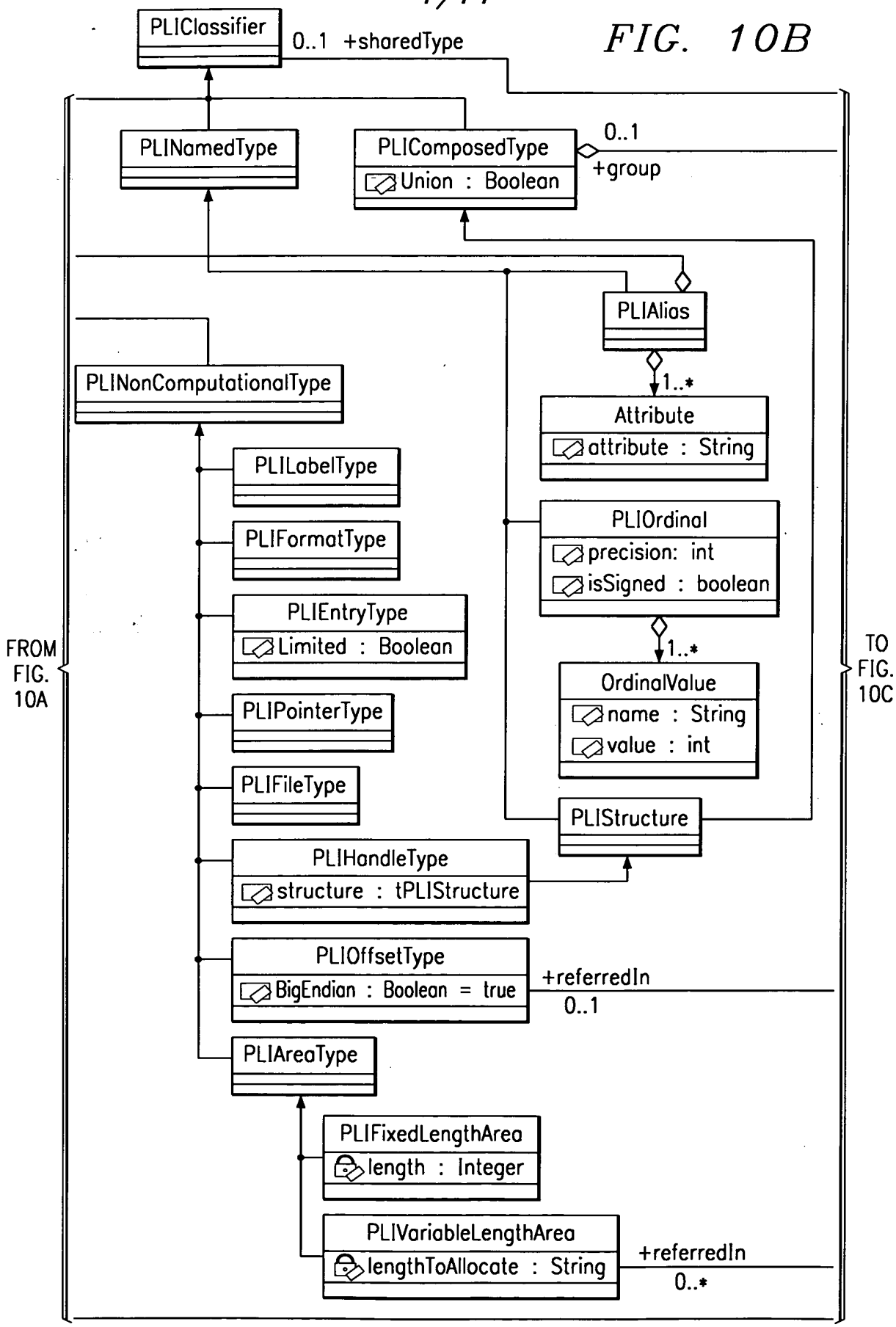

PLISimpleType
PLIComputationalType
PLIArithmeticType
mode : ModeValues
PLIStringType
PLIIntegerType
precision : Integer
scale : Integer
Signed : Boolean
BigEndian : Boolean = true
PLIPictureStringType
pictureString : String
PLICodedStringType
type : StringTypeValues
varying : LengthType
PLIFloatType
base : BaseValues
precision : Integer
IEEE : Boolean = false
BigEndian : Boolean = true
PLIFixedLengthString
length : Integer
PLIVariableLengthString
lengthToAllocate : String
PLIPackedType
precision : Integer
scale : Integer
PLIPictureType
pictureString : String
0..*
+referredIn
TO FIG. 10B

FIG. 10A

FIG. 10B


PLIClassifier
0..1 +sharedType
PLINamedType
PLIComposedType
Union : Boolean
0..1
+group
PLIAlias
1..*
Attribute
attribute : String
PLINonComputationalType
PLILabelType
PLIFormatType
PLIEntryType
Limited : Boolean
PLIPointerType
PLIFileType
PLIHandleType
structure : tPLIStructure
PLIOffsetType
BigEndian : Boolean = true
+referredIn
0..1
PLIAreaType
PLIFixedLengthArea
length : Integer
PLIVariableLengthArea
lengthToAllocate : String
+referredIn
0..*
PLIOrdinal
precision: int
isSigned : boolean
1..*
OrdinalValue
name : String
value : int
PLIStructure
FROM FIG. 10A
TO FIG. 10C

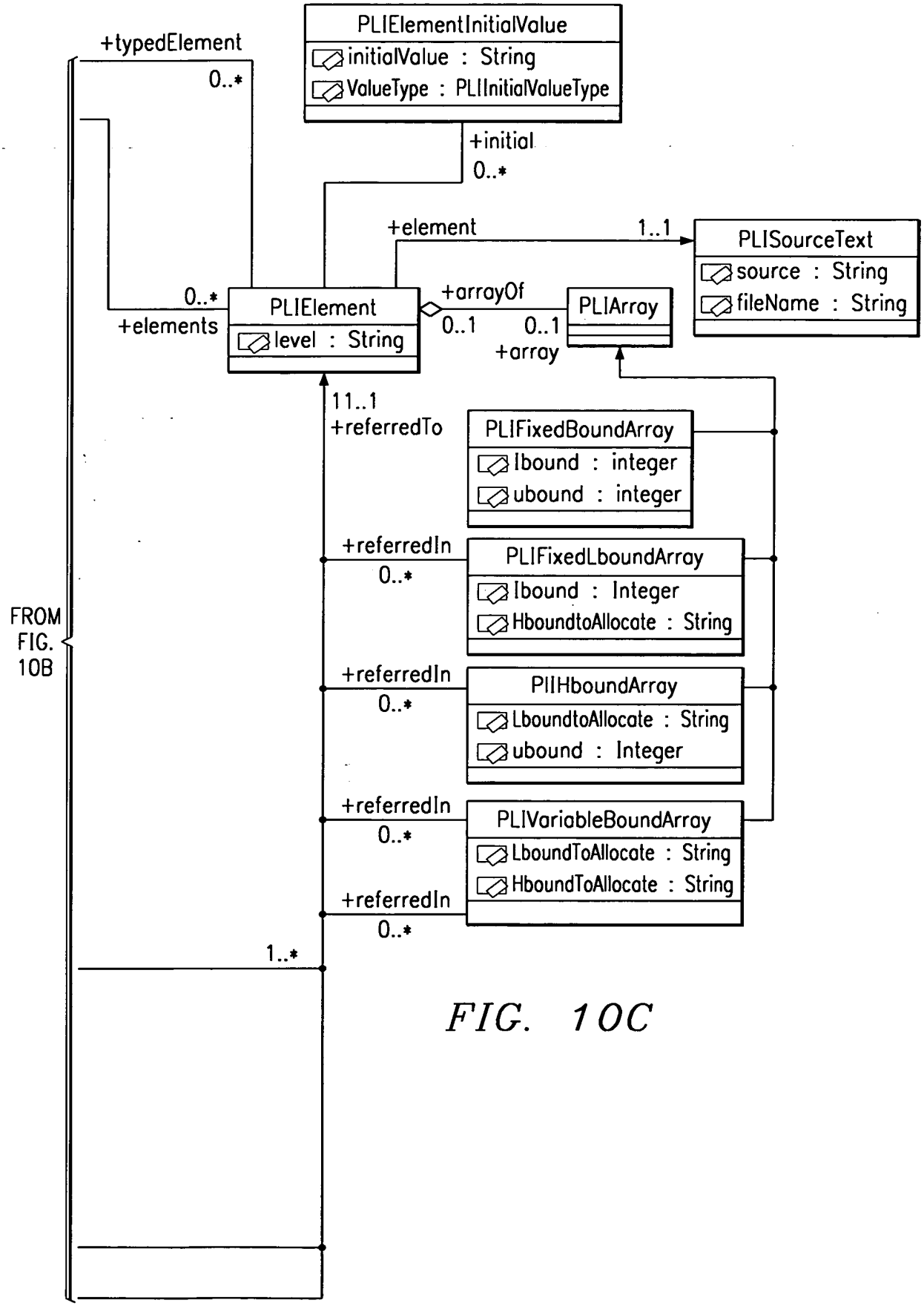

PLIElementInitialValue
initialValue : String
ValueType : PLIInitialValueType
+typedElement
0..*
+initial
0..*
+element
1..1
PLISourceText
source : String
fileName : String
0..*
+elements
PLIElement
level : String
+arrayOf
0..1
0..1
+array
PLIArray
11..1
+referredTo
PLIFixedBoundArray
lbound : integer
ubound : integer
+referredIn
0..*
PLIFixedLboundArray
lbound : Integer
HboundtoAllocate : String
+referredIn
0..*
PLIHboundArray
LboundtoAllocate : String
ubound : Integer
+referredIn
0..*
PLIVariableBoundArray
LboundToAllocate : String
HboundToAllocate : String
+referredIn
0..*
1..*
FROM
FIG.
10B

FIG. 10C

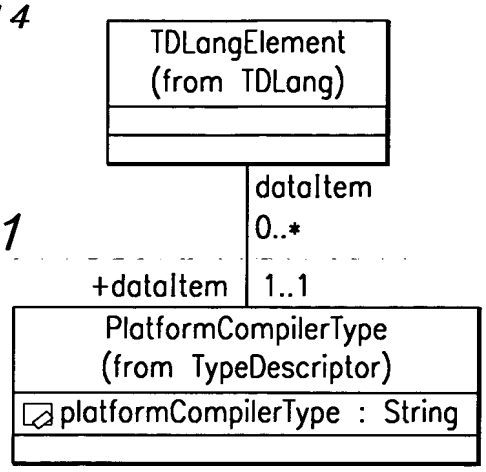


FIG. 11

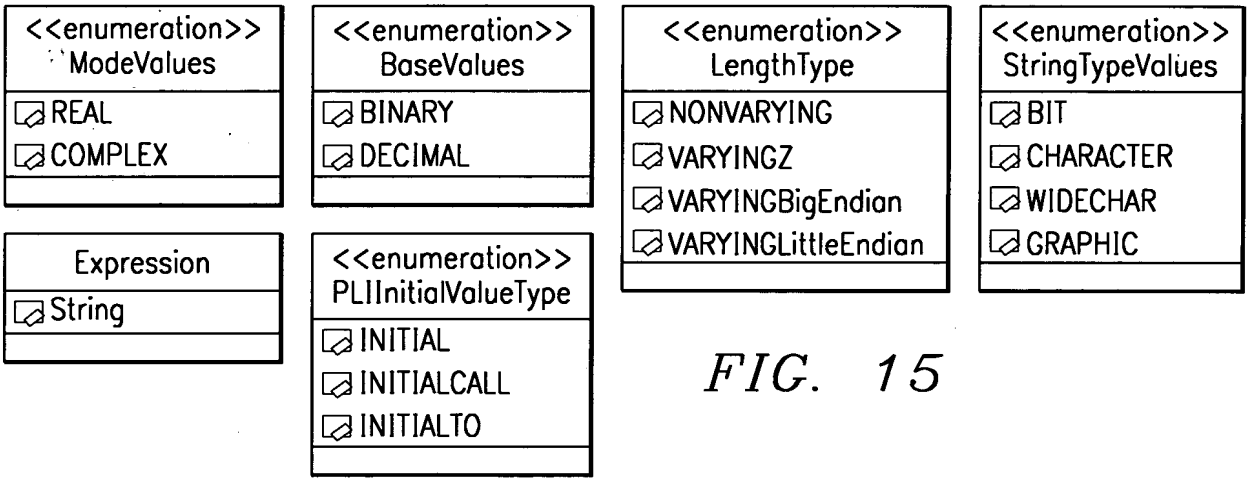


FIG. 15

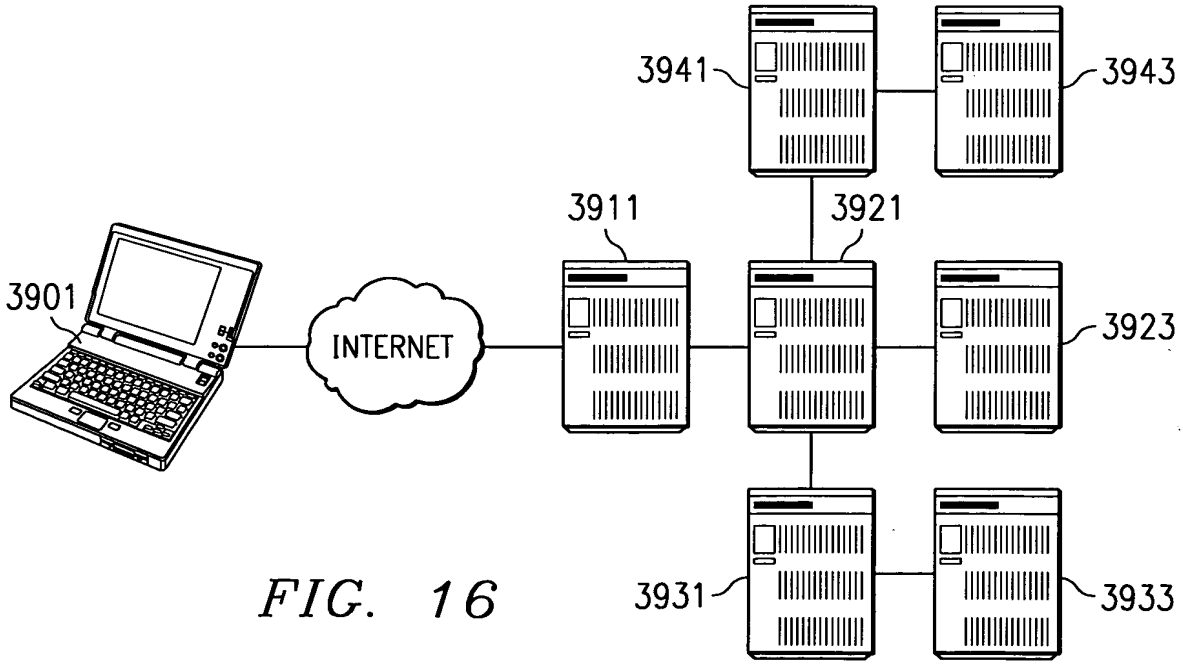


FIG. 16

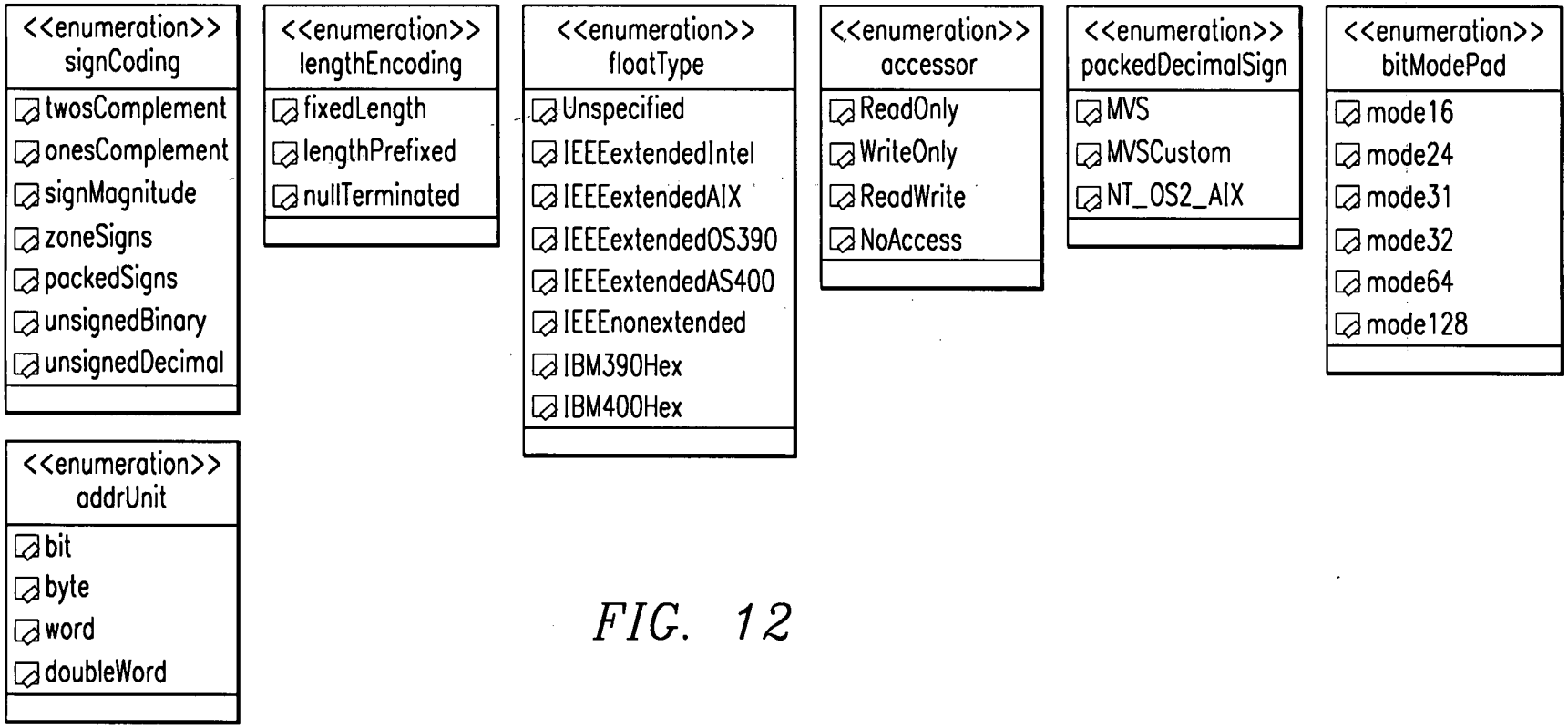

<<enumeration>>
signCoding
twosComplement
onesComplement
signMagnitude
zoneSigns
packedSigns
unsignedBinary
unsignedDecimal
<<enumeration>>
lengthEncoding
fixedLength
lengthPrefixed
nullTerminated
<<enumeration>>
floatType
Unspecified
IEEEextendedIntel
IEEEextendedAIX
IEEEextendedOS390
IEEEextendedAS400
IEEEnonextended
IBM390Hex
IBM400Hex
<<enumeration>>
accessor
ReadOnly
WriteOnly
ReadWrite
NoAccess
<<enumeration>>
packedDecimalSign
MVS
MVSCustom
NT_OS2_AIX
<<enumeration>>
bitModePad
mode16
mode24
mode31
mode32
mode64
mode128
<<enumeration>>
addrUnit
bit
byte
word
doubleWord

FIG. 12

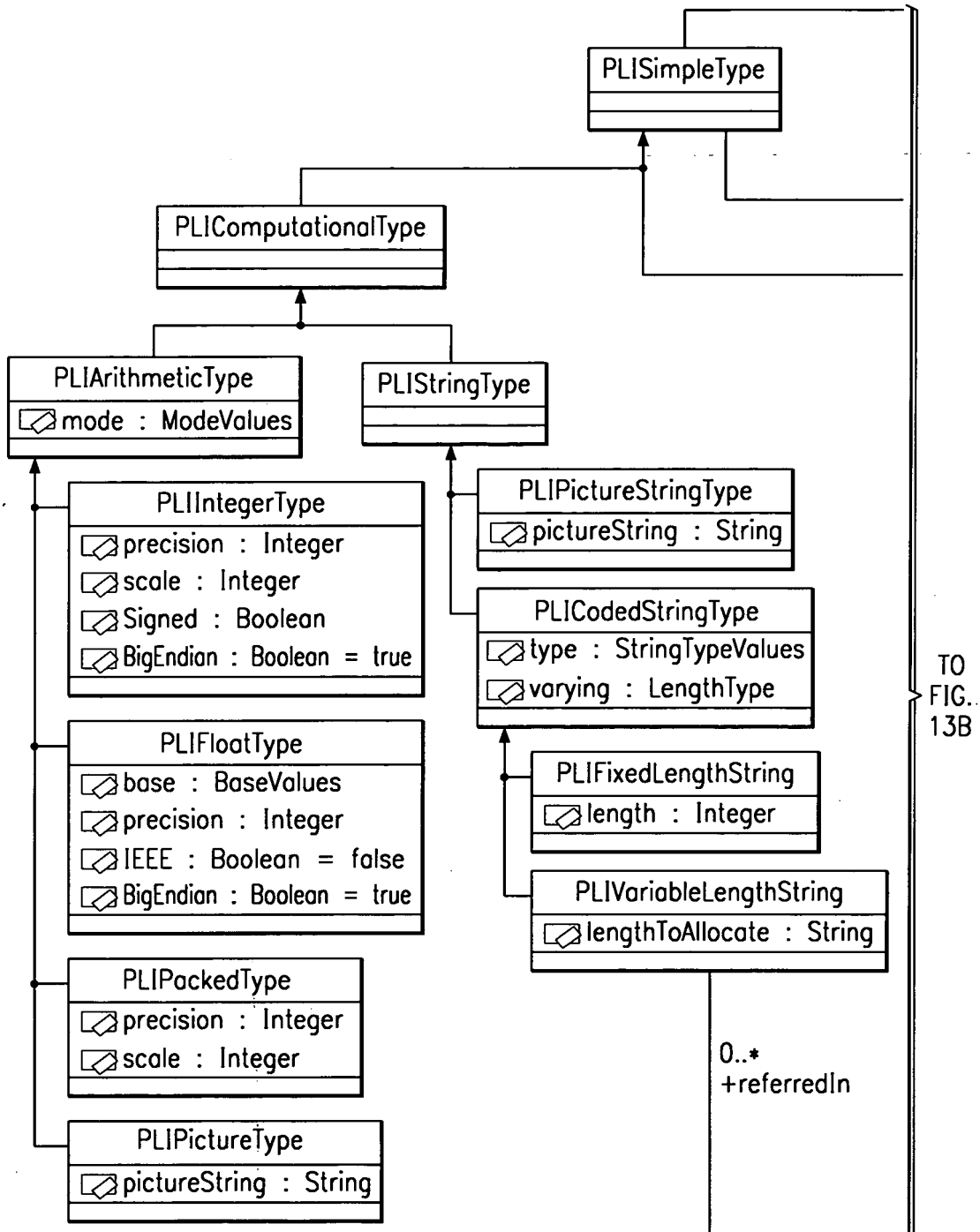
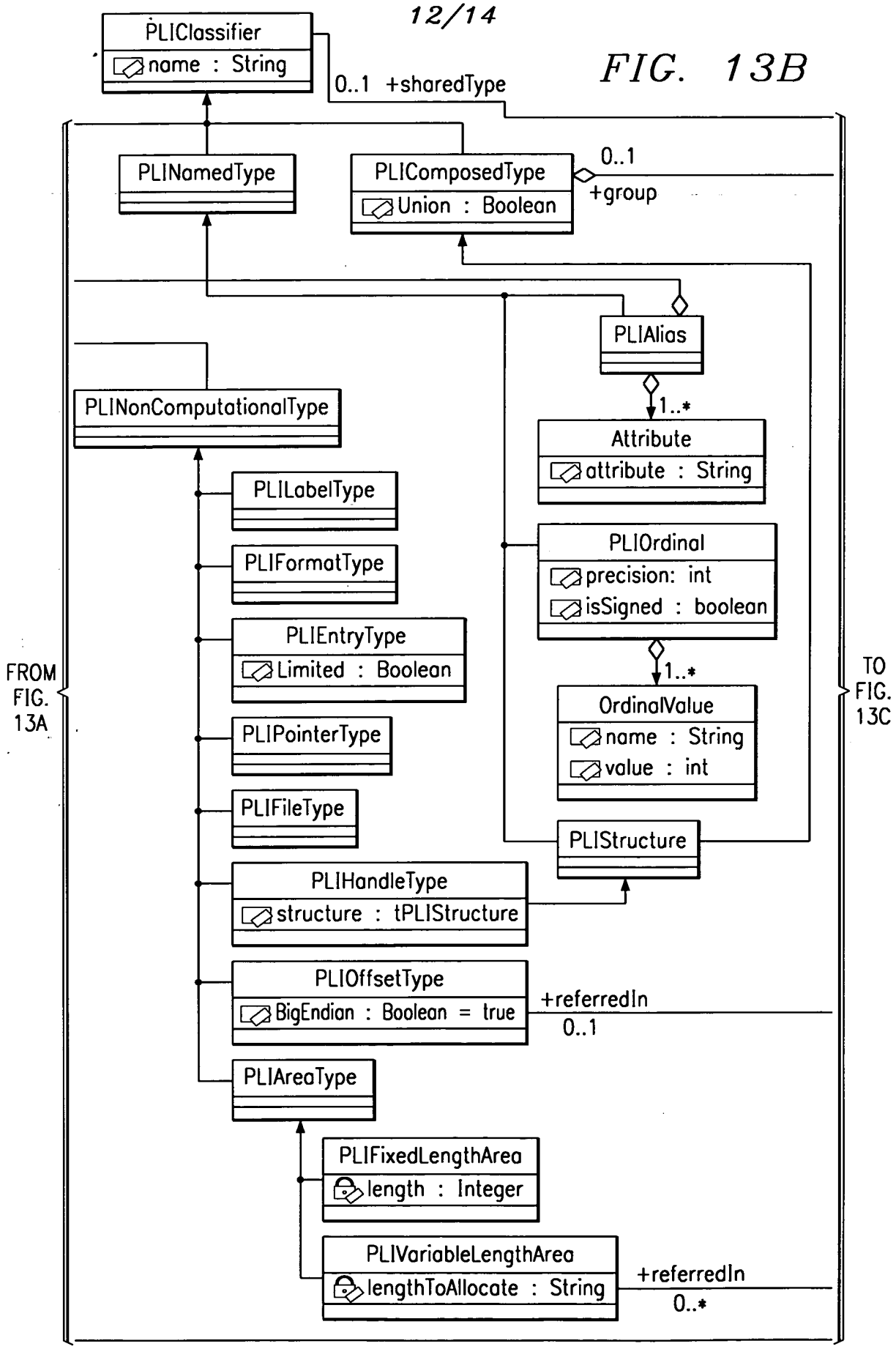

PLISimpleType
PLIComputationalType
PLIArithmeticType
mode : ModeValues
PLIStringType
PLIIntegerType
precision : Integer
scale : Integer
Signed : Boolean
BigEndian : Boolean = true
PLIPictureStringType
pictureString : String
PLICodedStringType
type : StringTypeValues
varying : LengthType
PLIFloatType
base : BaseValues
precision : Integer
IEEE : Boolean = false
BigEndian : Boolean = true
PLIFixedLengthString
length : Integer
PLIVariableLengthString
lengthToAllocate : String
PLIPackedType
precision : Integer
scale : Integer
PLIPictureType
pictureString : String
0..*
+referredIn
TO FIG. 13B

FIG. 13A

FIG. 13B


PLIClassifier
name : String
0..1 +sharedType
PLINamedType
PLIComposedType
Union : Boolean
0..1
+group
PLIAlias
1..*
Attribute
attribute : String
PLINonComputationalType
PLILabelType
PLIFormatType
PLIEntryType
Limited : Boolean
PLIPointerType
PLIFileType
PLIHandleType
structure : tPLIStructure
PLIOrdinal
precision: int
isSigned : boolean
1..*
OrdinalValue
name : String
value : int
PLIStructure
PLIOffsetType
BigEndian : Boolean = true
+referredIn
0..1
PLIAreaType
PLIFixedLengthArea
length : Integer
PLIVariableLengthArea
lengthToAllocate : String
+referredIn
0..*
FROM FIG. 13A
TO FIG. 13C

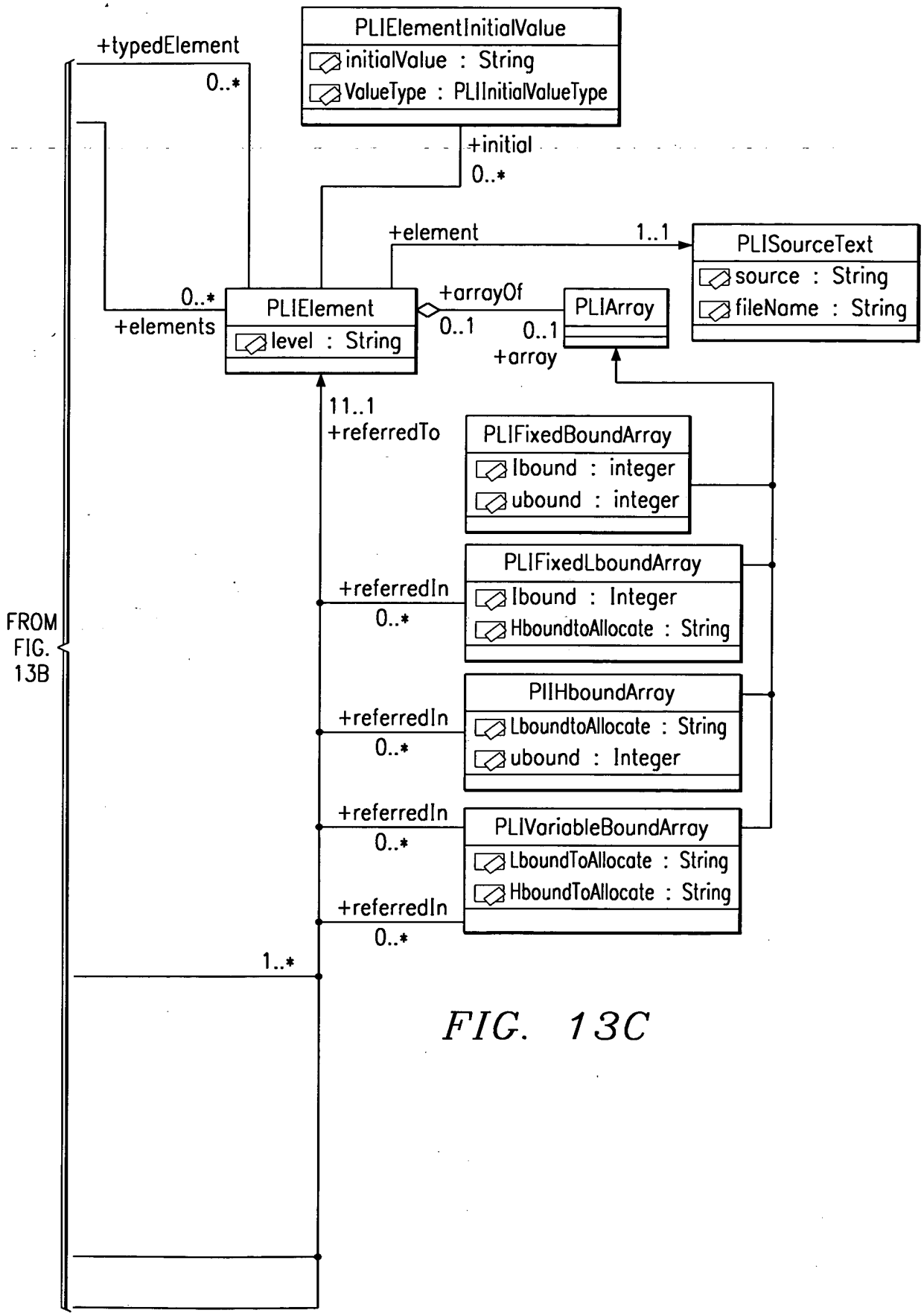

PLIElementInitialValue
initialValue : String
ValueType : PLIInitialValueType
+typedElement
0..*
+initial
0..*
+element
1..1
PLISourceText
source : String
fileName : String
0..*
+elements
PLIElement
level : String
+arrayOf
0..1
0..1
PLIArray
+array
11..1
+referredTo
PLIFixedBoundArray
lbound : integer
ubound : integer
PLIFixedLboundArray
lbound : Integer
HboundtoAllocate : String
+referredIn
0..*
PIIHboundArray
LboundtoAllocate : String
ubound : Integer
+referredIn
0..*
PLIVariableBoundArray
LboundToAllocate : String
HboundToAllocate : String
+referredIn
0..*
1..*
FROM
FIG.
13B

FIG. 13C

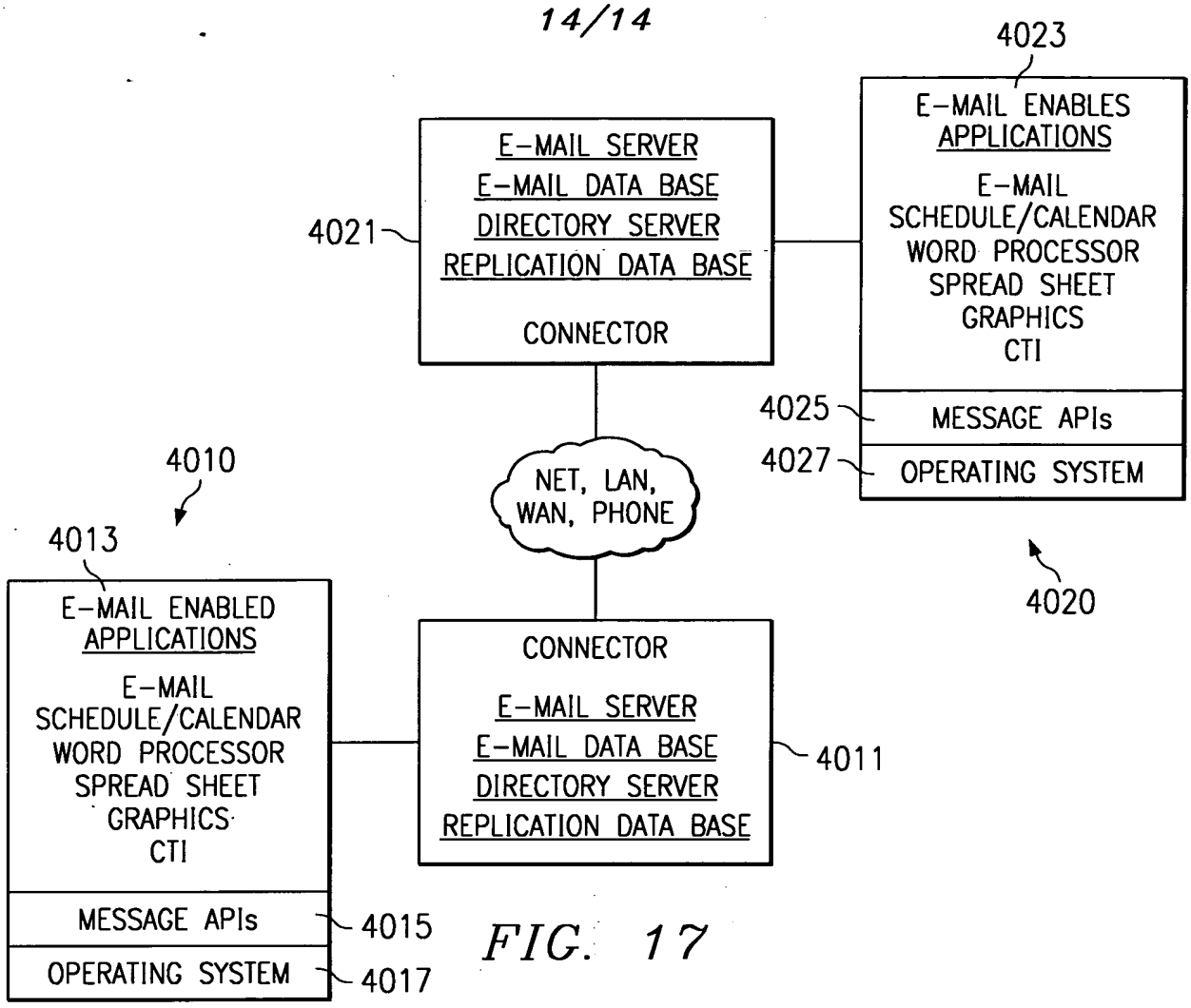

4023
E-MAIL ENABLES APPLICATIONS
E-MAIL
SCHEDULE/CALENDAR
WORD PROCESSOR
SPREAD SHEET
GRAPHICS
CTI
4025
MESSAGE APIs
4027
OPERATING SYSTEM
4020
E-MAIL SERVER
E-MAIL DATA BASE
DIRECTORY SERVER
REPLICATION DATA BASE
CONNECTOR
4021
NET, LAN, WAN, PHONE
4010
4013
E-MAIL ENABLED APPLICATIONS
E-MAIL
SCHEDULE/CALENDAR
WORD PROCESSOR
SPREAD SHEET
GRAPHICS
CTI
MESSAGE APIs
4015
OPERATING SYSTEM
4017
CONNECTOR
E-MAIL SERVER
E-MAIL DATA BASE
DIRECTORY SERVER
REPLICATION DATA BASE
4011

FIG. 17

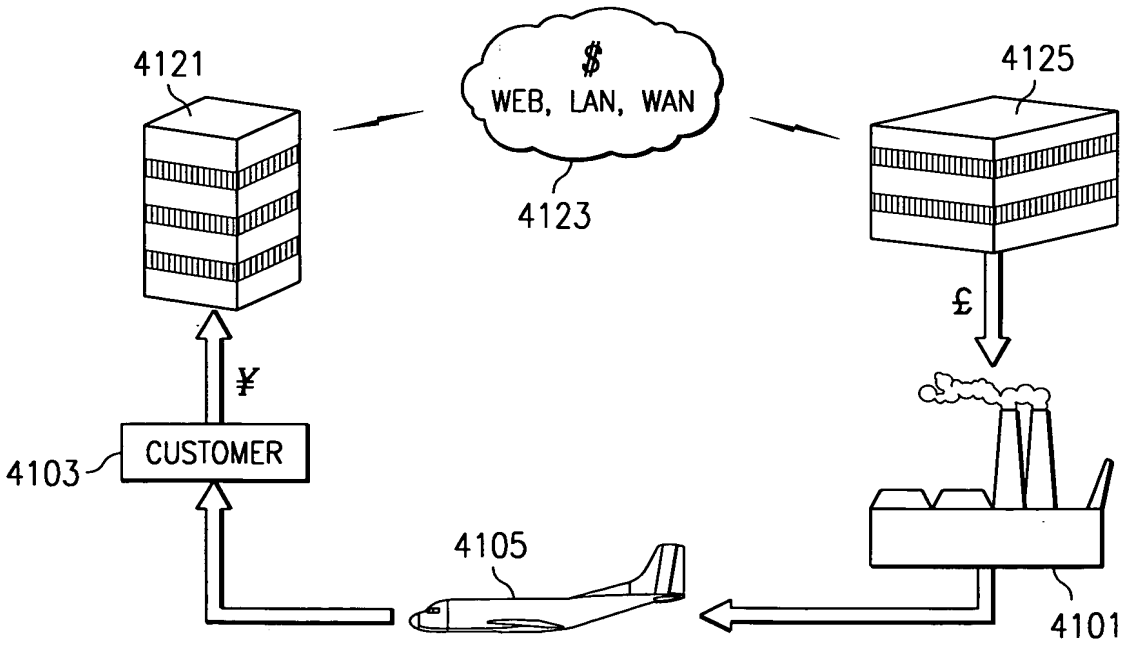

4121
$
WEB, LAN, WAN
4123
4125
£
¥
4103
CUSTOMER
4105
4101

FIG. 18